

**Amendments to the Claims**

**This listing of claims will replace all prior versions and listings of claims.**

1-20. (Canceled)

21. (Previously Presented) An isolated antibody or fragment thereof that specifically binds to a protein selected from the group consisting of:

- (a) a protein consisting of amino acid residues 1 to 541 of SEQ ID NO:2;
- (b) a protein consisting of amino acid residues 2 to 541 of SEQ ID NO:2;
- (c) a protein consisting of a portion of SEQ ID NO:2, wherein said portion comprises at least 30 contiguous amino acid residues of SEQ ID NO:2; and
- (d) a protein consisting of a portion of SEQ ID NO:2, wherein said portion comprises at least 50 contiguous amino acid residues of SEQ ID NO:2.

22. (Previously Presented) The antibody or fragment thereof of claim 21 that specifically binds protein (a).

23. (Previously Presented) The antibody or fragment thereof of claim 21 that specifically binds protein (b).

24. (Previously Presented) The antibody or fragment thereof of claim 21 that specifically binds protein (c).

25. (Previously Presented) The antibody or fragment thereof of claim 21 that specifically binds protein (d).

26. (Currently Amended) The antibody or fragment thereof of claim 22 that specifically binds ~~protein (b)~~ protein (d).

27. (Previously Presented) The antibody or fragment thereof of claim 22 wherein said protein bound by said antibody or fragment thereof is glycosylated.

28. (Previously Presented) The antibody or fragment thereof of claim 22 which is a human antibody.

29. (Previously Presented) The antibody or fragment thereof of claim 22 which is a polyclonal antibody.

30. (Previously Presented) The antibody or fragment thereof of claim 22 which is selected from the group consisting of:

- (a) a chimeric antibody;
- (b) a humanized antibody;
- (c) a single chain antibody; and
- (d) a Fab fragment.

31. (Previously Presented) The antibody or fragment thereof of claim 22 wherein said antibody or fragment thereof specifically binds to said protein in a Western blot.

32. (Previously Presented) The antibody or fragment thereof of claim 22 wherein said antibody or fragment thereof specifically binds to said protein in an ELISA.

33. (Previously Presented) An isolated cell that produces the antibody or fragment thereof of claim 22.

34. (Previously Presented) A hybridoma that produces the antibody or fragment thereof of claim 22.

35. (Currently Amended) A method of detecting G-Protein Parathyroid Hormone Receptor HLTDG74 (G-protein PTH receptor) in a biological sample comprising:

- (a) contacting the biological sample with the antibody or fragment thereof of claim 22; and
- (b) detecting the G-protein PTH receptor in the biological sample bound to the antibody or fragment thereof of claim 22.

36. (Previously Presented) The method of claim 35 wherein the antibody or fragment thereof is a polyclonal antibody.

37. (Currently Amended) An isolated antibody ~~or fragment thereof~~ obtained from an animal, or fragment thereof, that has been immunized with a protein selected from the group consisting of:

(a) a protein comprising the amino acid sequence of amino acid residues 1 to 541 of SEQ ID NO:2;

(b) a protein comprising the amino acid sequence of amino acid residues 2 to 541 of SEQ ID NO:2;

(c) a protein comprising the amino acid sequence of at least 30 contiguous amino acid residues of SEQ ID NO:2; and

(d) a protein comprising the amino acid sequence of at least 50 contiguous amino acid residues of SEQ ID NO:2;

wherein said antibody or fragment thereof specifically binds to said amino acid sequence.

38. (Previously Presented) The antibody or fragment thereof of claim 37 obtained from an animal immunized with protein (a).

39. (Previously Presented) The antibody or fragment thereof of claim 37 obtained from an animal immunized with protein (b).

40. (Previously Presented) The antibody or fragment thereof of claim 37 obtained from an animal immunized with protein (c).

41. (Previously Presented) The antibody or fragment thereof of claim 37 obtained from an animal immunized with protein (d).

42. (Previously Presented) The antibody or fragment thereof of claim 37 which is a monoclonal antibody.

43. (Previously Presented) The antibody or fragment thereof of claim 37 which is selected from the group consisting of:

- (a) a chimeric antibody;
- (b) a polyclonal antibody;
- (c) a humanized antibody;
- (d) a single chain antibody; and
- (e) a Fab fragment.

44. (Previously Presented) An isolated monoclonal antibody or fragment thereof that specifically binds to a protein selected from the group consisting of:

- (a) a protein consisting of amino acid residues 1 to 541 of SEQ ID NO:2;
- (b) a protein consisting of amino acid residues 2 to 541 of SEQ ID NO:2;
- (c) a protein consisting of a portion of SEQ ID NO:2, wherein said portion comprises at least 30 contiguous amino acid residues of SEQ ID NO:2; and
- (d) a protein consisting of a portion of SEQ ID NO:2, wherein said portion comprises at least 50 contiguous amino acid residues of SEQ ID NO:2.

45. (Previously Presented) The antibody or fragment thereof of claim 44 that specifically binds protein (a).

46. (Previously Presented) The antibody or fragment thereof of claim 44 that specifically binds protein (b).

47. (Previously Presented) The antibody or fragment thereof of claim 44 that specifically binds protein (c).

48. (Previously Presented) The antibody or fragment thereof of claim 44 that specifically binds protein (d).

49. (Currently Amended) The antibody or fragment thereof of claim 45 that specifically binds ~~protein (b)~~ protein (d).

50. (Previously Presented) The antibody or fragment thereof of claim 45 wherein said protein bound by said antibody or fragment thereof is glycosylated.

51. (Previously Presented) The antibody or fragment thereof of claim 45 which is a human antibody.

52. (Previously Presented) The antibody or fragment thereof of claim 45 which is selected from the group consisting of:

- (a) a chimeric antibody;
- (b) a humanized antibody;
- (c) a single chain antibody; and
- (d) a Fab fragment.

53. (Previously Presented) The antibody or fragment thereof of claim 45 wherein said antibody or fragment thereof specifically binds to said protein in a Western blot.

54. (Previously Presented) The antibody or fragment thereof of claim 45 wherein said antibody or fragment thereof specifically binds to said protein in an ELISA.

55. (Previously Presented) An isolated cell that produces the antibody or fragment thereof of claim 45.

56. (Previously Presented) A hybridoma that produces the antibody or fragment thereof of claim 45.

57. (Currently Amended) A method of detecting G-protein PTH receptor in a biological sample comprising:

- (a) contacting the biological sample with the antibody or fragment thereof of claim 45; and
- (b) detecting the G-protein PTH receptor in the biological sample bound to the antibody or fragment thereof of claim 45.

58. (Previously Presented) An isolated antibody or fragment thereof that specifically binds to a protein selected from the group consisting of:

(a) a protein consisting of the full-length polypeptide encoded by the cDNA contained in ATCC Deposit Number 97186;

(b) a protein consisting of the mature form of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97186;

(c) a protein consisting of a portion of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97186, wherein said portion comprises at least 30 contiguous amino acid residues of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97186; and

(d) a protein consisting of a portion of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97186, wherein said portion comprises at least 50 contiguous amino acid residues of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97186.

59. (Previously Presented) The antibody or fragment thereof of claim 58 that specifically binds protein (a).

60. (Previously Presented) The antibody or fragment thereof of claim 58 that specifically binds protein (b).

61. (Previously Presented) The antibody or fragment thereof of claim 58 that specifically binds protein (c).

62. (Previously Presented) The antibody or fragment thereof of claim 58 that specifically binds protein (d).

63. (Currently Amended) The antibody or fragment thereof of claim 59 that specifically binds ~~protein (b)~~ protein (d).

64. (Previously Presented) The antibody or fragment thereof of claim 59 wherein said protein bound by said antibody or fragment thereof is glycosylated.

65. (Previously Presented) The antibody or fragment thereof of claim 59 which is a human antibody.

66. (Previously Presented) The antibody or fragment thereof of claim 59 which is a polyclonal antibody.

67. (Previously Presented) The antibody or fragment thereof of claim 59 which is selected from the group consisting of:

- (a) a chimeric antibody;
- (b) a humanized antibody;
- (c) a single chain antibody; and
- (d) a Fab fragment.

68. (Previously Presented) The antibody or fragment thereof of claim 59 wherein said antibody or fragment thereof specifically binds to said protein in a Western blot.

69. (Previously Presented) The antibody or fragment thereof of claim 59 wherein said antibody or fragment thereof specifically binds to said protein in an ELISA.

70. (Previously Presented) An isolated cell that produces the antibody or fragment thereof of claim 59.

71. (Previously Presented) A hybridoma that produces the antibody or fragment thereof of claim 59.

72. (Currently Amended) A method of detecting G-protein PTH receptor in a biological sample comprising:

(a) contacting the biological sample with the antibody or fragment thereof of claim 59; and

(b) detecting the G-protein PTH receptor in the biological sample bound to the antibody or fragment thereof of claim 59.

73. (Previously Presented) The method of claim 72 wherein the antibody or fragment thereof is a polyclonal antibody.

74. (Currently Amended) An isolated antibody ~~or fragment thereof~~ obtained from an animal, or fragment thereof, that has been immunized with a protein selected from the group consisting of:

(a) a protein comprising the amino acid sequence of the full-length polypeptide encoded by the cDNA contained in ATCC Deposit Number 97186;

(b) a protein comprising the amino acid sequence of the mature form of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97186;

(c) a protein comprising the amino acid sequence of at least 30 contiguous amino acid residues of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97186; and

(d) a protein comprising the amino acid sequence of at least 50 contiguous amino acid residues the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97186;

wherein said antibody or fragment thereof specifically binds to said amino acid sequence.

75. (Previously Presented) The antibody or fragment thereof of claim 74 obtained from an animal immunized with protein (a).

76. (Previously Presented) The antibody or fragment thereof of claim 74 obtained from an animal immunized with protein (b).



77. (Previously Presented) The antibody or fragment thereof of claim 74 obtained from an animal immunized with protein (c).

78. (Previously Presented) The antibody or fragment thereof of claim 74 obtained from an animal immunized with protein (d).

79. (Previously Presented) The antibody or fragment thereof of claim 74 which is a monoclonal antibody.

80. (Previously Presented) The antibody or fragment thereof of claim 74 which is selected from the group consisting of:

- (a) a chimeric antibody;
- (b) a polyclonal antibody;
- (c) a humanized antibody;
- (d) a single chain antibody; and
- (e) a Fab fragment.

81. (Previously Presented) An isolated monoclonal antibody or fragment thereof that specifically binds to a protein selected from the group consisting of:

- (a) a protein consisting of the full-length polypeptide encoded by the cDNA contained in ATCC Deposit Number 97186;
- (b) a protein consisting of the mature form of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97186;
- (c) a protein consisting of a portion of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97186, wherein said portion comprises at least 30 contiguous amino acid residues of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97186; and
- (d) a protein consisting of a portion of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97186, wherein said portion comprises at least 50 contiguous amino acid residues of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97186.

82. (Previously Presented) The antibody or fragment thereof of claim 81 that specifically binds protein (a).

83. (Previously Presented) The antibody or fragment thereof of claim 81 that specifically binds protein (b).

84. (Previously Presented) The antibody or fragment thereof of claim 81 that specifically binds protein (c).

85. (Previously Presented) The antibody or fragment thereof of claim 81 that specifically binds protein (d).

86. (Previously Presented) The antibody or fragment thereof of claim 82 that specifically binds ~~protein (b)~~ protein (d).

87. (Previously Presented) The antibody or fragment thereof of claim 82 wherein said protein bound by said antibody or fragment thereof is glycosylated.

88. (Previously Presented) The antibody or fragment thereof of claim 82 which is a human antibody.

89. (Previously Presented) The antibody or fragment thereof of claim 82 which is selected from the group consisting of:

- (a) a chimeric antibody;
- (b) a humanized antibody;
- (c) a single chain antibody; and
- (d) a Fab fragment.

90. (Previously Presented) The antibody or fragment thereof of claim 82 wherein said antibody or fragment thereof specifically binds to said protein in a Western blot.

91. (Previously Presented) The antibody or fragment thereof of claim 82 wherein said antibody or fragment thereof specifically binds to said protein in an ELISA.

92. (Previously Presented) An isolated cell that produces the antibody or fragment thereof of claim 82.

93. (Previously Presented) A hybridoma that produces the antibody or fragment thereof of claim 82.

94. (Currently Amended) A method of detecting G-protein PTH receptor in a biological sample comprising:

(a) contacting the biological sample with the antibody or fragment thereof of claim 82; and

(b) detecting the G-protein PTH receptor in the biological sample bound to the antibody or fragment thereof of claim 82.

95. (Previously Presented) An isolated antibody or fragment thereof that specifically binds G-protein PTH receptor expressed on the surface of a cells in a cell culture wherein the cells in said cell culture comprise a polynucleotide encoding amino acids 1 to 541 of SEQ ID NO:2 operably associated with a regulatory sequence that controls the expression of said polynucleotide.

96. (Previously Presented) The antibody or fragment thereof of claim 95 which is a monoclonal antibody.

97. (Previously Presented) The antibody or fragment thereof of claim 95 which is a human antibody

98. (Previously Presented) The antibody or fragment thereof of claim 95 which is selected from the group consisting of:

- (a) a chimeric antibody;
- (b) a polyclonal antibody;
- (c) a humanized antibody;
- (d) a single chain antibody; and
- (e) a Fab fragment.

99. (Previously Presented) The antibody or fragment thereof of claim 95 wherein said antibody or fragment thereof specifically binds to said protein in a Western blot.

100. (Previously Presented) The antibody or fragment thereof of claim 95 wherein said antibody or fragment thereof specifically binds to said protein in an ELISA.